REMARKS

Applicants respectfully request the Examiner to reconsider the present application in view of the foregoing amendments to the claims and the following remarks

Status of the Claims

Claims 1, 4-14, 19 and 22-24 are pending. Claim 1 is independent. Claims 22-24 are withdrawn from consideration as being directed to non-elected subject matter.

In the present Amendment, claims 1 and 11 have been amended. Claims 2-3, 15-18, 20-21 and 25 were previously canceled without prejudice or disclaimer of the subject matter contained therein.

No new matter has been added by way of the present amendments. Support for the amendment to claim 1 is found in the present specification in paragraphs [0098] (pages 46-47) and [0138] (pages 60-61). The amendment to claim 11 is editorial in nature. This is a clarifying and not a narrowing amendment. Thus, Applicants in no way are conceding any limitations with respect to the interpretation of the claims under the Doctrine of Equivalents.

Reconsideration of this application, as amended, is respectfully requested.

Priority under 35 U.S.C. § 119

Applicants thank the Examiner for acknowledging Applicants' claim for foreign priority under 35 U.S.C. § 119, and receipt of the certified priority document.

Information Disclosure Citation

Applicants thank the Examiner for considering the reference supplied with the Information Disclosure Statement filed June 24, 2010, and for providing Applicants with an initialed copy of the PTO-SB/08 form filed therewith.

Issues Under 35 U.S.C. § 102(b)

Claims 1, 4-6, 8-14 and 19 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Ikuta et al. (U.S. 2003/0118839; hereinafter "**Ikuta '839**") (Office Action, paragraphs 2-22).

Applicants respectfully traverse. Reconsideration and withdrawal of this rejection are respectfully requested.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

Applicable U.S. Case Law

A prior art reference, in order to anticipate under 35 U.S.C. § 102, must disclose those elements "arranged as in the claim", and not simply a disclosure of those elements "within the four corners" of the single document. Further, this requirement, more accurately understood to mean "arranged or combined in the same way as in the claim," applies to all types of claims and refers to need for anticipatory reference to show all limitations of claim arranged or combined in same manner recited in claim, not merely in particular order. *Net MoneyIN Inc. v. VeriSign Inc.*, 545 F.3d 1359, 88 USPQ2d 1751, 1758-1759 (Fed. Cir. 2008).

The Present Invention

Applicants respectfully refer the Examiner to the claims as shown herein. The present invention is directed to a molded composite article in which a resin member comprises a non-urethane thermoplastic resin and a resin member comprising a thermoplastic polyurethane resin. Further, the non-urethane thermoplastic resin and resin member are directly joined with each other. Also in the present invention, for example, a specific number average molecular weight of a polyamide oligomer, and the thermoplastic polyurethane resin is a thermoplastic polyurethane elastomer.

Ikuta '839 Fails to Disclose All Claimed Features

The cited Ikuta '839 reference fails to disclose all claimed features. Though the Examiner refers Applicants to various parts of Ikuta '839 in the Office Action, Applicants note pages 22-23, Ikura '839, which claims the following invention:

> 1. A composite comprising a vulcanized rubber member formed by a vulcanization of a non-silicone-series unvulcanized rubber, and a resin member comprising a thermoplastic resin and directly bonded to the rubber member, which comprises a combination of a rubber member vulcanized with a radical-generating agent and a resin member comprising a thermoplastic resin having at least 2 atoms, on average, selected from a hydrogen atom and a sulfur atom per molecule, and each atom has an orbital interaction energy coefficient S of not less than 0.006 ...
>
> 2. A composite according to claim 1, wherein the thermoplastic resin comprises at least one member selected from the group consisting of a polyamide-series resin, a polyester-series resin, a polyether-series resin, a polyolefinic resin, a polyurethane-series resin, and a thermoplastic elastomer.
>
> ...
>
> 4. A composite according to claim 1, wherein the rubber comprises at least one member selected from the group consisting of a diene-series rubber, an

> olefinic rubber, an acrylic rubber, a fluorine-containing rubber, and an urethane-series rubber.
>
> ...
>
> 11. A composite according to claim 1, wherein the thermoplastic resin comprises a vulcanizing auxiliary comprising a compound having at least 2 hydrogen atoms on average per molecule, and said hydrogen atoms each has an orbital interaction energy coefficient S recited in claim 1 of not less than 0.006.

Also, Ikuta '839 at pages 10-11 contains the following description about the vulcanizing auxiliary:

> [0108] The vulcanization auxiliary can be selected depending on species of the resin and the rubber, and includes, for example, an oligomer of the thermoplastic resin described in the headings (1) to (8) (e.g., an oligomer having a number-average molecular weight of about 100 to 1000 such as an oligomer of the polyamide-series resin and an oligomer of the polyester-series resin), a polyamine [e.g., the polyamine described in the heading (2) polyester-series resin], a polyol [e.g., the polyol described in the heading (2) polyester-series resin], a polycarboxylic acid or an acid anhydride thereof, a plural-aldehyde groups containing compound, an epoxy compound, a nitrogen-containing resin (e.g., an amino resin), a methylol group- or alkoxymethyl group-containing compound, a polyisocyanate, and the like. These vulcanization auxiliaries may be used singly or in combination.

Applicants note the required vulcanization in Ikuta '839. Ikuta '839 fails to disclose a molded composite article in which the instantly claimed thermoplastic polyurethane elastomer directly bonds or joins to the specific non-urethane thermoplastic resin ((Ib-1) or (Ib-2)). That is, and as further explained below, the vulcanized rubber in Ikuta '839 does not correspond to the thermoplastic polyurethane elastomer. Even if the Ikuta '839 method was applied, Applicants also note that it is clear that the thermoplastic elastomer would not be vulcanized because of loss of thermoplasticity during vulcanization. Thus, the present invention is essentially different from the vulcanized rubber of Ikuta '839.

Further, as Ikuta '839 requires vulcanized rubber, the vulcanizing process in Ikuta '839 is essential for bonding the rubber and the resin. Put differently, in Ikuta '839, the rubber and the resin are bonded by vulcanizing. More specifically, with vulcanization, the resin is bonded to the rubber by reacting the radical-generating agent in the unvulcanized rubber composition with the specific atom(s) (i.e., hydrogen atom(s) or sulfur atom(s)) of the resin.

On the other hand, the present invention incorporates the thermoplastic polyurethane elastomer and the specific non-urethane thermoplastic resin among the various thermoplastic resins, and directly joins or bonds these resins without vulcanization as required in the cited Ikuta '839 reference. Thus, Ikuta '839 is also absolutely different from the present invention in the mechanism of bonding (as claimed), as well as in overall concept. Applicants again note the claims of Ikuta '839.

Therefore, Ikuta '839 fails to disclose the present invention as "arranged or combined in the same way as in the claims". *Net MoneyIN Inc.; supra.* In other words, Ikuta '839 fails to disclose all claimed features, and this rejection for anticipation has been overcome.

Reconsideration and withdrawal of this rejection are respectfully requested

Issues under 35 U.S.C. § 103(a)

Claim 7 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Ikuta '839 (Office Action, paragraphs 23-26). Applicants respectfully traverse. Reconsideration and withdrawal of this rejection are respectfully requested.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

Applicable U.S. Case Law

The obviousness inquiry is decided as a matter of law, based on four general factual inquiries as explained in *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966), and reaffirmed in *KSR Int'l, Inc. v. Teleflex, Inc.*, 550 U.S. 398, 406–07 (2007). Here, as explained below, Applicants respectfully submit that the *Graham* factors, including the *Graham* factor of ascertaining the differences between the prior art and the claims at issue, weigh in Applicants' favor. Also, a proper rationale has not been used to reject the disputed claims

Distinctions over Ikuta '839

Claim 7 depends on claim 1, and Applicants submit that the comments above regarding the anticipation rejection apply to this obviousness rejection as well. Specifically, as mentioned above, Ikuta '839 discloses a different concept by vulcanizing its rubber and resin components. Ikuta '839 fails to disclose the instantly claimed molded composite article in which the thermoplastic polyurethane elastomer directly bonds or joins to the specific non-urethane thermoplastic resin ((Ib-1) or (Ib-2)). Such bonding is without vulcanization. Therefore, the *Graham* factors, including ascertaining the differences between the prior art and the claims at issue, weigh in Applicants' favor.

Further, as stated in M.P.E.P. § 2143.02, the prior art can be modified or combined to reject claims as *prima facie* obvious as long as there is a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). However, in finding a reasonable expectation of success, at least some degree of predictability is required. *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976). Here, Ikuta '839 can only bond the

resin and the vulcanized rubber through vulcanization. Thus, one of ordinary skill in the art, upon reading Ikuta '839, would never understand how the bonding strength between a non-urethane thermoplastic resin and a thermoplastic polyurethane elastomer can be improved other than through the described and claimed vulcanization.

In addition, the other *Graham* factors also weigh in Applicants favor, including the factor or evaluating any evidence of secondary considerations (e.g., unexpected results). In particular, due to the claimed combination of the thermoplastic polyurethane elastomer and the specific non-urethane thermoplastic resin, the present invention ensures the significantly improved bonding strength between these thermoplastic resins. Such advantages have been experimentally proven as discussed in shown in Applicants' specification (see, e.g., Table 2 on page 86). In this regard, such evidence of patentability for the present invention as discussed in the specification has to be considered. *See In re Soni*, 54 F.3d 746, 34 USPQ2d 1684 (Fed. Cir. 1995) (error not to consider evidence in the specification); *see also* M.P.E.P. § 2145. Moreover, since the present invention does not require vulcanizing, the thermoplastic polyurethane elastomer is directed joined or bonded to the non-urethane thermoplastic resin while maintaining thermoplasticity.

Finally, Applicants note that the rationale behind the instant rejection appears to be based on what the skilled artisan may be able to do. However, under *Ex parte Levengood*, 28 USPQ2d 1300, 1301-02 (BPAI 1993) and *Ex parte Gerlach*, 212 USPQ 471 (BPAI 1980), the Examiner cannot equate that which is within the capabilities of one skilled in the art ("one of ordinary skill in the art could adjust the parameters") with obviousness.

Therefore, the *Graham* factors weigh in Applicants' favor. Ikuta '839 requires vulcanization, and the skilled artisan would not be able to achieve the present invention based on

such disclosure. Further, unexpected results for the present invention exist such that this rejection has been rebutted. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Issues Under 35 U.S.C. § 112, 2nd Paragraph

Claims 1-20 stand rejected under 35 U.S.C. § 112, second paragraph (Office Action, paragraphs 27-30). This rejection is respectfully traversed.

Applicants respectfully refer the Examiner to the disputed claims as shown herein. Claim 1 has been amended herein to delete the word "series." Also, claim 11 has been amended herein to delete the phrase, "a polyamide oligomer." Thus, Applicants respectfully submit that the present claims fully comply with 35 U.S.C. § 112, second paragraph.

Reconsideration and withdrawal of this rejection are respectfully requested.

Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

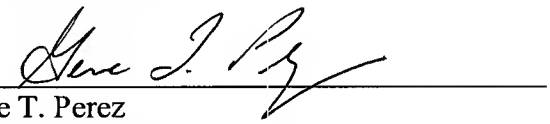
In view of the above amendment, Applicants believe the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Eugene T. Perez, Registration No. 48,501, at the telephone number of the undersigned below to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Director is hereby authorized to charge any fees required during the pendency of the above-identified application or credit any overpayment to Deposit Account No. 02-2448.

Dated: February 22, 2011

Respectfully submitted,

By 

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